

**BEFORE THE PUBLIC UTILITIES COMMISSION  
OF THE STATE OF CALIFORNIA**



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Order Instituting Rulemaking on the  
Commission's Own Motion to improve  
distribution level interconnection rules and  
regulations for certain classes of electric  
generators and electric storage resources.

Rulemaking No. 11-09-011  
(Filed September 22, 2011)

**COMMENTS ON THE STAFF REPORTS REGARDING INTERCONNECTION COST  
CERTAINTY AND ENERGY STORAGE INTERCONNECTION OF THE  
INTERSTATE RENEWABLE ENERGY COUNCIL, INC.**

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September 12, 2014

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OF THE STATE OF CALIFORNIA**

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On July 29, 2014, Administrative Law Judge Bushey issued a Ruling Setting Schedule for Comments on Staff Reports and Scheduling Prehearing Conference (Ruling) in this docket. The two staff reports attached to the ruling and subject to comment are: Attachment A, Cost Certainty for the Interconnection Process: Staff Proposal (Cost Certainty Report); and Attachment B, Issues, Priorities and Recommendations for Energy Storage Interconnection: Staff Proposal (Energy Storage Report). The Interstate Renewable Energy Council, Inc. (IREC) hereby submits comments on both reports.

IREC is a non-profit organization whose goal is to enable greater use of clean energy in a sustainable way by: (1) introducing regulatory policy innovations that empower consumers and support a transition to a sustainable energy future; (2) removing technical constraints to distributed energy resource integration; and (3) developing and coordinating national strategies and policy guidance to provide consistency on these policies centered on best practices and solid research. The scope of IREC's work includes updating interconnection processes to facilitate deployment of distributed energy resources (DER) under high deployment scenarios, and incorporating DER growth into utility distribution system planning and operations. As part of this work, IREC has participated actively in this docket since its inception. In particular, as

discussed in the Staff Report, IREC filed a cost certainty proposal on October 25, 2012,<sup>1</sup> which drew on our experience in California and other states. IREC has been or is currently involved in similar interconnection and grid modernization proceedings in New York, Massachusetts and Hawaii, among others. In addition, in California, IREC is participating in Rulemaking (R.) 14-08-013, which addresses the development of the investor-owned utilities' (IOU) Distribution Resource Plans (DRP) pursuant to Assembly Bill (AB) 327 (Perea 2013). On September 5, 2014, IREC filed comments on the Order Instituting Rulemaking (OIR) in docket R.14-08-013 (DRP OIR Comments), which we reference in our comments below.

## **I. Cost Certainty for the Interconnection Process**

The recent updates to the Rule 21 interconnection procedures resulted in significant improvements to the interconnection process that have provided developers with a clearer and more efficient experience, which translates to a more cost effective and streamlined process for customers. The new rule improves access to the expedited Fast Track review process, while also improving the clarity of the study process. These advancements have helped to facilitate the continued growth of distributed generation (DG) in California, which is certainly commendable. However, IREC anticipates that, as the penetration of DG continues to increase, this process will once again be under strain as more and more projects trigger significant upgrades. Thus, as we indicated in our DRP OIR Comments, IREC believes that California will need to tackle the integration of DG and the associated interconnection processes in a more holistic way.

The DRPs should address cost allocation, cost certainty and optimally locating DER in a way that informs and alters the Rule 21 interconnection process. We view the DRPs as part of a

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<sup>1</sup> Cost Certainty Report at 9-10 (referring to Comments of the Interstate Renewable Energy Council, Inc. on Amended Scoping Memo and Ruling Requesting Comments at 4-8 (Oct. 25, 2012) [hereinafter IREC Oct. 25, 2012 Comments]).

broader, necessary evolution of the serial interconnection procedures into a more integrated interconnection and distribution planning process. By taking a more holistic look at the integration of DER into the distribution system, the Commission and the IOUs will be better able to minimize the costs of interconnecting DER, and appropriately allocate both costs and benefits across customers. While the two proposals set forth in the Cost Certainty Report should serve to provide additional cost certainty as compared to the existing interconnection process, IREC suggests that more significant revision to the way that California approaches distribution system planning and DER interconnection will be necessary. We encourage the Commission to consider requiring further development of approaches to handling cost allocation and certainty in the DRPs.

With that caveat, IREC commends the Commission for its willingness in this docket to tackle the issue of cost certainty, which has been a source of frustration for applicants, in particular during times when the queue is congested and cost estimates fluctuate. In addition, IREC agrees with Staff that much can be learned from the ease and efficiency of the net energy metering (NEM) interconnection process, where cost uncertainty has been removed from the equation.<sup>2</sup> Like Staff, however, IREC appreciates that ratepayers currently carry those costs. At this time, we do not propose that the responsibility for non-NEM interconnection costs should be shifted to ratepayers. Nonetheless, we do believe that the efficiencies associated with the simplified NEM interconnection process are illustrative of what might be achieved if we move away from the serial approach to distribution upgrades, which is only reactive to individual interconnection applications.

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<sup>2</sup> Cost Certainty Report at 4-5.

In considering the two-tiered cost certainty proposal presented in the Cost Certainty Report, IREC has tried to keep in mind that the most effective processes are often those that are straightforward. After evaluating the two proposed approaches, IREC suggests that the Commission should consider applying Staff’s “cost envelope” proposal for non-Fast Track projects, based on the Massachusetts interconnection procedures, across the board to both Fast Track and non-Fast Track projects. As Staff indicates, this approach has numerous merits: it is simple to execute; it keeps the onus for accurate cost estimates on the utility and the responsibility for those costs on the applicant; it enables the applicant to rely on the estimate provided by the utility; and any costs more than 10% in excess of the estimate are born by utility shareholders, not ratepayers.<sup>3</sup> Moreover, Massachusetts utilities have successfully used the cost envelope approach for a number of years, whereas the Fast Track proposal would be a new, untested process. Applying the cost envelope proposal to all projects would promote consistency in the interconnection process and would not require California’s IOUs to employ different procedures for different projects more than necessary. Finally, as recognized in the Cost Certainty Report, it is easiest for the IOUs to develop fixed, accurate costs estimates to simple Fast Track projects, which typically require no further study or upgrades.<sup>4</sup> Therefore, the IOUs should be to easily estimate costs within 10% of their actual amount for these types of projects.

While IREC believes that it may be preferable to apply the Massachusetts-based cost envelope approach to all projects instead of adopting a two-tiered approach, we offer our comments on both of Staff’s proposals below in case the Commission should choose to pursue the bifurcated proposal suggested by Staff.

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<sup>3</sup> *Id.* at 10.

<sup>4</sup> *Id.* at 9.

## **A. Proposal Part A: Fast Track Projects**

Originally the Fast Track process was reserved for projects that would result in no upgrades, but with the 2012 updates to Rule 21, particularly the improved supplemental review process, some projects that require upgrades may now proceed through Fast Track. As the IOUs noted in their initial proposal, however, there is a more limited scope to the types of upgrades that Fast Track projects will trigger.<sup>5</sup> This means that the range of potential costs is more contained, making it easier for the IOUs to develop accurate cost estimates. For these same reasons, however, the value of a proposal applicable only to these projects is reduced.

IREC offers the following comments regarding the details and implementation of the Fast Track cost certainty proposal. First, we note that the proposal would allow the IOUs to true-up any differences in estimated and actual costs in customer rates.<sup>6</sup> IREC recognizes that the cost certainty that this proposal intends to encourage would have some benefits for ratepayers and that the goal would be for there to be little or no true-up necessary. If this true-up approach is used, however, IREC suggests that it would need to be reevaluated at some point to ensure that neither developers nor ratepayers are overburdened with a cost shift.

### **a. Harmonization of IOUs' Rule 21 Tariffs**

IREC fully agrees that the IOUs' interconnection tariffs should be harmonized to the extent possible, including with respect to defining a "low impact area" for the purposes of this proposal. For this proposal to function as envisioned, IREC believes it would be necessary for an applicant to be able determine whether or not her project is in a low impact area prior to submitting an application, since selecting the fixed-cost option would be part of the application

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<sup>5</sup> Joint Cost Certainty Proposal of Pacific Gas and Electric Company (U 39 E), Southern California Edison Company (U 338 E) and San Diego Gas & Electric Company (U 902 E) at 3 (Jan. 18, 2013) [hereinafter Joint Cost Certainty Proposal].

<sup>6</sup> Cost Certainty Report at 8; *see also* Joint Cost Certainty Proposal at 6.

process. IREC notes that Southern California Edison Company (SCE) has proposed that any project that passes Fast Track should be considered to be in a “low impact area.”<sup>7</sup> While IREC agrees, we note that an applicant cannot determine whether this is the case prior to beginning the process. Therefore, we believe another clear definition would be necessary for the current proposal to work.

That being said, IREC questions the need in the first place to limit the application of this proposal to Fast Track projects choosing to interconnect in “low impact areas.” We agree with SCE that Fast Track projects are inherently “low impact,” having successfully passed all of the Rule 21 technical screens. Therefore, IREC suggests that eligibility for this proposal should not be limited to some subset of Fast Track projects, but rather that all Fast Track projects should be able to receive such a fixed-cost estimate if they choose. If the Commission opts to proceed with limiting eligibility for such an estimate to projects in “low impact areas,” however, IREC suggests that parties have the opportunity to comment further on the method used to define and determine these areas. We further suggest that the Commission should coordinate its definition of “low impact areas” with its definition of “optimal locations” within the DRP docket R.14-08-013.

#### **b. Reporting of Cost Estimates and Actual Costs**

IREC strongly supports increased transparency related interconnection costs. Therefore we support the proposal to require the IOUs to report Rule 21 cost estimates and actual costs. As Staff notes more than once, the options for improving cost certainty are currently limited due to the lack of data, including data related to interconnection upgrades.<sup>8</sup> IREC agrees that the

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<sup>7</sup> Joint Cost Certainty Proposal at 5.

<sup>8</sup> Cost Certainty Report at 9 (“However, to make this regime [IREC’s cost certainty proposal] workable, I would require analysis of data that, to date, has not been produced by utilities despite

Commission should begin seeking more interconnection data from the IOUs in order to understand the process better and hold the IOUs accountable as appropriate. We further note that, as with the issue of low-impact and optimal grid locations, this issue of data transparency is central to the DRP docket R.14-08-013.

**c. Timing of the Fixed Cost Estimate Option**

In line with our comments above, IREC does not understand why applicants must select the fixed cost option before they receive their Fast Track review results. We do not see the benefit in requiring an applicant to make this decision earlier in the process. An applicant could choose to provide the additional information with her application or provide it after she receives her Fast Track results. While making a selection upfront may not be overly burdensome, an applicant may want to choose which approach to take upon learning the scope of the upgrades identified rather than at the beginning of the process.

In addition, in their initial proposal, the IOUs indicated that they will attempt to provide the fixed cost estimate “within approximately 30 to 70 Business Days after the Applicant’s submission of all necessary information . . . .”<sup>9</sup> The current Rule 21 procedures, in Section F.2.e, do not currently identify a concrete timeline for development of the cost estimate and IREC is not aware of any data source that provides a picture of how long this process typically takes for Fast Track projects. Thus, the proposed process is not necessarily going to provide applicants with the cost information any sooner than they would have received it under the current process. It appears that the only benefit to the proposed process would be the certainty associated with

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persistent prodding by multiple interested parties.”), 11 (“The problem with relying on a data-drive scheme for cost certainty is that the utilities have not produced enough data about the costs of actual interconnection from which to devise a reliable methodology.”).

<sup>9</sup> *Id.* at 6.



fixing the cost. This is the same benefit that the Massachusetts cost envelope approach would provide and therefore IREC does not see any added benefits of the Fast Track-only approach.

**d. Fixed Cost Estimate Fee**

IREC strongly agrees with Staff that a fee for the proposed fixed cost estimate is not justified. The IOUs must determine the costs of interconnection upgrades under any scenario and it is not clear what additional labor would be required from IOU staff to justify a fee for simply fixing the cost estimate. Moreover, ratepayers would bear the risk of cost overruns or the benefit of overestimates under the proposed fixed-cost approach. Thus it is not clear what the fee is intended to cover.

In conclusion, IREC reiterates our preference to extend the cost envelope approach to all projects, including the Fast Track projects addressed by this fixed estimate proposal. We believe that the cost envelope approach would be more effective and has been tested thoroughly by the Massachusetts utilities, and applying it to all projects would promote consistency. IREC does not believe that the fixed cost proposal offers additional improvements that warrant applying different approaches to Fast Track versus non-Fast Track projects.

**B. Proposal Part B: Non-Fast Track Projects**

IREC supports this proposal as a reasonable, well tested approach to provide both cost certainty and accountability. Ultimately, we believe that the Commission and the IOUs should seek to direct developers toward optimal grid locations, as we intended to do in our cost certainty proposal in this docket.<sup>10</sup> We hope that this goal will be addressed more thoroughly in the DRP docket R.14-08-013.

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<sup>10</sup> See IREC Oct. 25, 2012 Comments at 4-8.

IREC notes that the current Massachusetts interconnection process offers two further improvements for the Commission to consider.

First, in addition to the +/- 10% cost estimate provided after the final detailed study, Massachusetts utilities must provide a +/- 25% cost estimate after the initial impact study.<sup>11</sup> Although this initial cost estimate is not binding, except to the extent discussed in the following paragraph, it provides applicants with an early sense of the range of upgrade costs they can expect. Like the +/- 10% cost estimate provided after the detailed study, the initial +/- 25% cost estimate provided after the impact study has been part of the Massachusetts interconnection procedures for a number of years. IREC suggests that California might offer a similar two-tiered cost estimate approach to offer this additional, early indication of upgrade costs to interconnecting customers.

Second, interconnection applicants in Massachusetts have the option of signing an interconnection service agreement (ISA) after the completion of the impact study, based on the +/- 25% cost estimate resulting from that study.<sup>12</sup> The interconnecting customer is then

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<sup>11</sup> Mass. Dept. of Pub. Utils., DPU 11-75-E, Order on the Distributed Generation Working Group's Redlined Tariff and Non-Tariff Recommendations, Appendix A (Standards for Interconnection of Distributed Generation) § 3.4(d) ("... the Impact Study will produce an estimate for the modification costs (within +/- 25%) . . ."), Exhibit F (Detailed Study Agreement) § 8 ("The Company will, in writing, advise the Interconnecting Customer in advance of any cost increase for work to be performed up to a total amount of increase of 10% only. All costs that exceed the 10% increase cap will be borne solely by the Company. ") (March 13, 2013).

All Massachusetts documents referenced in these comments are available at [http://www.env.state.ma.us/DPU\\_FileRoom/frmDocketListSP.aspx](http://www.env.state.ma.us/DPU_FileRoom/frmDocketListSP.aspx) (search "11-75").

IREC participated in the Massachusetts Distributed Generation Working Group and helped to develop recommended revisions to the Massachusetts interconnection procedures adopted by DPU 11-75-E in March 2013.

<sup>12</sup> DPU 11-75-E, Appendix A, § 3.4(e) ("At the conclusion of the Impact Study, an Interconnecting Customer may request and sign an Interconnection Service Agreement."), Exhibit F § 8 ("Interconnecting Customers who elect to execute an Interconnection Services Agreement following the completion of the Impact Study but prior to the commencement of any Design Studies, pursuant to Section 3.4(e) of the Interconnection Tariff, shall be responsible for any System Modifications costs, ±25%, as identified by the Company in the Impact Study.").

responsible for costs up to 25% in excess of the utility's estimate, rather than just 10%.<sup>13</sup> This modification to Massachusetts' interconnection procedures was under consideration when IREC submitted our comments describing these procedures in October 2012.<sup>14</sup> It has since been adopted and so-called "early ISAs" have been successfully offered since April 2013. Provision of these early ISAs is especially valuable to developers from a financing perspective, as it allows them to provide interconnection agreements with relative certainty as to costs to financiers earlier in the process. IREC suggests that the Commission consider a similar modification to its procedures to allow the early provision of interconnection agreements with only +/- 25% cost certainty. We emphasize that, as with the 10% proposal already under consideration, any costs in excess of these estimates would be born by utility shareholder, not ratepayers.

In addition, IREC offers the following comments regarding Staff's proposed modifications to the Massachusetts model.

**i. Waiver for Costs Exceeding the 10% Buffer**

IREC believes that the waiver proposed by staff is reasonable, in particular because it is limited in its application.

**ii. IOU Penalties for Failure to Resolve Interconnection Issues**

IREC strongly supports encouraging the IOUs to resolve interconnection issues proactively and in a timely manner. We believe, however, that the proposal to impose monetary penalties on the IOUs for failing to do so requires additional detail before we can offer meaningful comments on it. In particular, we suggest that "proactively and in a timely manner"

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<sup>13</sup> DPU 11-75-E, Appendix A, § 3.4(e) ("If an Interconnecting Customer chooses to sign an Interconnection Service Agreement following the conclusion of the Impact Study, the Interconnecting Customer agrees to be bound by the +/- 25% System Modification costs identified in the Impact Study (see 3.4.(a)(d) above). The Company will not be required to provide a construction schedule until after it completes the Detailed Study.").

<sup>14</sup> See IREC Oct. 25, 2012 Comments at 7-8.

would need to be more clearly defined, and the level of and mechanism for collecting penalties would need to be fleshed out.

IREC notes that Massachusetts may offer another approach for consideration here. Recently the Massachusetts Department of Public Utilities approved a proposed “timeline enforcement mechanism,” which would impose monetary penalties on the utilities if they fail to meet timelines specified within the interconnection procedures.<sup>15</sup> The proposed mechanism was developed collaboratively and submitted jointly by utilities, developers, and the Massachusetts Department of Energy Resources. While discussion regarding one or two relatively minor details associated with the mechanism is ongoing, the Department has approved the concept and it will be implemented in utility compliance tariffs soon. IREC recognizes that the Massachusetts proposal is more wide-ranging than the penalties envisioned by Staff, since the Massachusetts mechanism applies to the interconnection process more broadly whereas Staff seeks to penalize the IOUs for failing to resolve interconnection disputes. Nonetheless, the mechanism adopted in Massachusetts could inform the penalty mechanism envisioned by Staff for the California IOUs.

### **iii. Proposed Advanced Interconnection Consultation Process**

IREC generally agrees that the IOUs should work with applicants to derive solutions for novel interconnection problems in a timely fashion. We believe that there may be opportunities within the current procedures to accomplish this goal, including in particular the Scoping Meeting in Section F.3.d.i. It would be helpful to consider how the proposed consultation process would interact with any existing processes in place to ensure that the procedures remain streamlined while also encouraging the collaborative resolution of any problems. In addition, we note that the preference should be towards developing clear standards and guidance that enable

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<sup>15</sup> Mass. Dept. of Pub. Utils., DPU 11-75-F, Order on a Timeline Enforcement Mechanism (July 31, 2014) (Appendix B to the order contains a clean version of the mechanism).

multiple situations to be addressed instead of requiring one-on-one consultation for each new scenario presented.

**iv. Tracking and Reporting Interconnection Costs**

As indicated above, IREC strongly supports increased transparency related interconnection costs and therefore we support this proposal. In addition to improved interconnection cost tracking, we look forward to further discussion of this issue in the DRP docket R.14-08-013.

**v. Online Availability and Submission of Interconnection Documents and Forms**

IREC agrees that all interconnection-related documentation and forms should be received via an internet-based submission channel, including allowance for electronic signatures. Likewise we agree that interconnection-related documents and information should be easily accessible online as much as possible.

**vi. Transparency and Accessibility of Distribution Grid Data**

As with interconnection cost data, IREC also strongly supports the transparency and accessibility of distribution grid data. We note that some of this data is already available as part of the Rule 21 Pre-Application Report as well as the system maps that the IOUs are required to provide. We agree with Staff that additional data transparency will be necessary as the Commission continues to look for ways to encourage optimally sited DER. Therefore, we believe the issue of data transparency and accessibility will be central to the discussion of the IOUs' DRPs in docket R.14-08-013.

As indicated in our recent comments in that docket, IREC believes that Integrated Distribution Planning (IDP) may be one way to begin improving the collection of and access to

grid data. Together with Sandia National Laboratories, IREC developed the IDP concept,<sup>16</sup> based on the Proactive Approach to interconnection being implemented in Hawaii.<sup>17</sup> Under the IDP framework, the utility determines the likely DER growth on its distribution system over one year, based on its interconnection queue and other data. By studying the aggregate capacity of existing facilities and the hosting capacity of existing equipment, it also determines its available hosting capacity for additional DER. Thus, the collection of this grid data is integral to the IDP process. Using this information, the utility assesses whether its existing equipment can accommodate anticipated DER installations and then plans for upgrades in areas where growth outpaces hosting capacity. IDP also necessarily requires that the utility effectively share this information with DER providers. We look forward to exploring this and other ways to improve distribution grid data transparency and accessibility at the Commission.

Finally, IREC again suggests that the Massachusetts cost envelope approach apply to all projects, including both Fast Track and non-Fast Track projects, for the reasons already discussed above.

## **II. Issues, Priorities, and Recommendations for Energy Storage Interconnection**

IREC offers more modest comments on the Staff Proposal regarding Energy Storage Interconnection, though IREC may weigh in further in reply comments. IREC appreciates the Commission's proactive efforts to identify and remove hurdles to the interconnection process for storage systems. IREC is concerned, however, that storage systems may be receiving overly

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<sup>16</sup> See *Integrated Distribution Planning (IDP) Concept Paper, A Proactive Approach for Accommodating High Penetrations of Distributed Generation* (May 2013), available at [www.irecusa.org/wp-content/uploads/2013/05/Integrated-Distribution-Planning-May-2013.pdf](http://www.irecusa.org/wp-content/uploads/2013/05/Integrated-Distribution-Planning-May-2013.pdf)

<sup>17</sup> See Order No. 32053, Ruling on RSWG Work Product, Docket No. 2011-0206, at 33, 49-57 (April 28, 2014), available at <http://puc.hawaii.gov/wp-content/uploads/2014/04/Order-No.-32053.pdf> (requiring HECO to implement a DG Interconnection Plan (DGIP) consistent with the Proactive Approach and describing the details of that approach).

conservative or complex treatment in these early stages for reasons unrelated to the potential safety, reliability and power quality impacts that their interconnection may impose on the electrical system. IREC believes that Rule 21 should remain focused on ensuring the safe and effective operation of the utility owned electrical system and that other concerns related to generators (of any sort) should be addressed through other regulatory means.

Throughout the Rule 21 reform process completed in 2012, stakeholders collectively attempted to ensure that the interconnection standards remained as neutral as possible with respect to technology and did not impose different standards on the basis of the type of procurement vehicle or sale arrangement. The one major exception to this rule has been NEM projects, which are treated differently as a result of the existing statutory cost waiver. IREC believes this principle of technology and procurement neutrality is an important operating framework for consideration as the Commission evaluates whether changes to Rule 21 are necessary to accommodate storage systems. It is important to keep in mind that there are multiple different storage technologies (batteries, flywheels, etc.), and that these different technologies may have different behaviors and capabilities. Baseline technologies change regularly, but the underlying electrical questions are relatively similar. Similarly, procurement vehicles change as well and it is preferable not to have to update Rule 21 on the basis of each new program the Commission authorizes.

## **1. Safety Planning**

The Staff Proposal recommends that the interconnection agreement contain a requirement for a custom Safety Plan and states that a “safety disclosure clause” should be added to Rule 21 as a requirement of the interconnection process. While IREC shares the Commission’s desire to

ensure systems are installed safely, IREC has significant concerns about this proposal, and believes it needs more explanation and justification before it can be evaluated fairly.

First, although the Energy Storage Report is not explicit as to the particular safety issues that these plans are intended to address, IREC understands that the intent is that these plans address safety issues that are unrelated to the safety of the electrical system, such as safety concerns related to fires that could be caused at a customer's property versus concerns about line worker safety as a result of electricity flowing from a storage system. If this is correct, IREC believes that this is not the purpose or function of the interconnection procedures and that these unidentified safety concerns should be addressed through the local building, electrical and fire code permitting process. To the extent the Commission is concerned about safety issues beyond the electrical system, it should maintain its approach of consulting with other statewide entities that have authority over these areas to ensure they are adequately addressed.

In addition, as noted above, IREC believes the interconnection process should remain technology-neutral to the greatest extent possible. The Energy Storage Report does not present any evidence or justification for requiring storage systems in particular to develop custom safety plans, nor does it acknowledge the wide range of storage technologies that exist. While certain types of storage may be somewhat new to the distribution system, there needs to be some record to demonstrate that "storage systems" as a whole pose a threat that is any more significant than the threats posed by other generator types. For example, is it reasonable to require a small flywheel system to have a safety plan when a large diesel generator does not also have to prepare a safety plan under Rule 21? Both may pose certain safety issues, but the local code enforcement process (and possibly other air quality, water quality, and hazardous materials permitting



requirements) exists to address concerns that are outside the scope of the utility's interconnection process and purview.

## **2. Pre-Interconnection Consultation Process**

IREC agrees with staff that utilities and potential interconnection customers should have the opportunity, and be encouraged to, proactively discuss the interconnection process where appropriate. As discussed above in section I.B.iii, some mechanisms, including the scoping meeting, already exist to enable this process. IREC believes this additional consultation process should be optional and available at no cost to the customer. However, the Commission should also aim for rules and guidance that can be applied neutrally to multiple different technologies and locations where possible to avoid the need for as much one-on-one consultation.

## **3. Define Storage Interconnection Terms and Concepts in the Definitions Section of Rule 21**

IREC has only one limited comment about definitions at this time. The definitions drafted should be flexible enough to apply to new storage technologies as they evolve and also should not be dependent upon specific storage procurement vehicles that may exist now but change over time. The definition of Generating Facility already includes storage, though the definition of Generator is not explicit in its inclusion of storage.

## **4. Identify the Fast Track Threshold for Storage Projects and the Fast Track Study Screens for Storage Projects**

In considering whether a specific Fast Track threshold or screens should be identified for exporting storage projects, IREC returns to the premise that the rules should strive to be technology-neutral. Storage is already included in the definition of Generating Facility. Thus, it is not clear to IREC if the Fast Track eligibility and screens need to change, or if there simply needs to be additional information provided to the utility in the Interconnection Application to

enable it to apply the existing screens to the systems. IREC looks forward to reviewing stakeholder comments on the particular screens or eligibility limits that others may believe are necessary.

With respect to the charging mode of storage systems, IREC encourages the Commission to proceed cautiously in imposing additional limitations, particularly on small storage systems, related to the charging functions where new loads of other types would not require similar treatment. The Rule 21 procedures are designed to address generators and the effect that sending electricity beyond the point of interconnection has on the electrical system. Customers that draw energy from the electrical system pay for that service through their electric tariff rates, and the associated grid upgrades and maintenance that utilities may be required to undertake to accommodate load are thus included in those rates.

The Energy Storage Report also seeks comments on the treatment that non-exporting storage systems receive under Rule 21. IREC appreciates that this is a significant issue that requires some discussion and evaluation to determine when a system should be required to undergo full interconnection review if it is designated as non-exporting. IREC does not have specific recommendations at this time regarding what level of “proof” should be required, other than to note that, once again, the application of the non-export rule to storage systems should be similar to the treatment of other types of non-exporting systems.

In addition, the Energy Storage Report asks parties to comment on the practicalities of reducing interconnection study times by standardizing study data and system characteristics. IREC believes that this is certainly an option worth further evaluation and consideration, and should be considered beyond the context of storage interconnections alone. This type of technological advancement may also be something that is appropriate to consider in the context

of the newly initiated DRP proceeding. IREC is unable to provide more detailed comments on this issue at this time.

#### **5. Update the Interconnection Agreement to Account for Storage Attributes**

As noted above in response to question 4, IREC urges caution in approaching questions regarding whether the charging function of the storage system needs additional treatment through the interconnection process. We also note that while the definition of Generating Facility already includes storage, the definition of Generator could be expanded to explicitly include storage.

The Energy Storage Report asks parties to comment on how the utility can best provide information to the applicant in order to move smoothly into the Interconnection Agreement signing phase. The proposal of providing study results that reflect possible high-, mid- and low-level distribution upgrade costs and corresponding upgrades could potentially enable customers to “right size” their facility. IREC is unsure why a requirement to provide this information should be unique to storage systems. It is IREC’s understanding that development of low-, mid- and high-use cases may require additional utility analysis. To the extent this is the case, the Commission may want to consider whether this information should be provided by default or only if requested.

Finally, the Energy Storage Report asks what types of penalties might accrue for operations outside of agreed-to uses restrictions. IREC again notes that storage systems should not be treated differently from other generators who may violate the terms of their interconnection agreements.

#### **6. Update the Interconnection Application to Account for Storage Attributes**

IREC agrees that it is likely appropriate to update the Interconnection Application to enable storage customers to provide the necessary system information via this Application rather

than through a supplemental document. As we note in our comments on the Cost Certainty Report, we also support the provision of information via an internet-based submission channel where possible.

**7. Utility Consideration of Alternative Interconnection Metering and Protection Schemes**

IREC has no comments on this question at this time.

**8. Electric Vehicle Interconnection Issues**

IREC has no comments on this question at this time.

**III. Conclusion**

IREC appreciates Staff's efforts to address the issues of interconnection cost certainty and the interconnection of energy storage. With respect to cost certainty, while we believe the proposed approaches have some merit in that they may improve cost certainty in the nearer term, we are hopeful that the DRP proceeding will offer an initial opportunity to think more holistically about the relationship between interconnection and the integration of DER into the IOUs' systems. IREC looks forward to participating in this docket and the DRP docket.

Respectfully submitted at Oakland, California,

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